
SODO ARENA

Budget and Fiscal Management Committee
King County Council
June 21, 2012

Transportation

SODO ARENA TRANSPORTATION

1. Existing strong policies to protect industrial zoning
2. Stadium Transition Area Overlay District—intent
3. Spectator Sports Facilities allowed use in IC
4. High Level Study—multimodal transportation access
5. Extensive traffic analysis as part of EIS process
6. SDOT/Mayor's Office discussions with Port of Seattle on overall Port transportation needs

SEATTLE ARENA MULTIMODAL TRANSPORTATION ACCESS AND PARKING STUDY



Parametrix

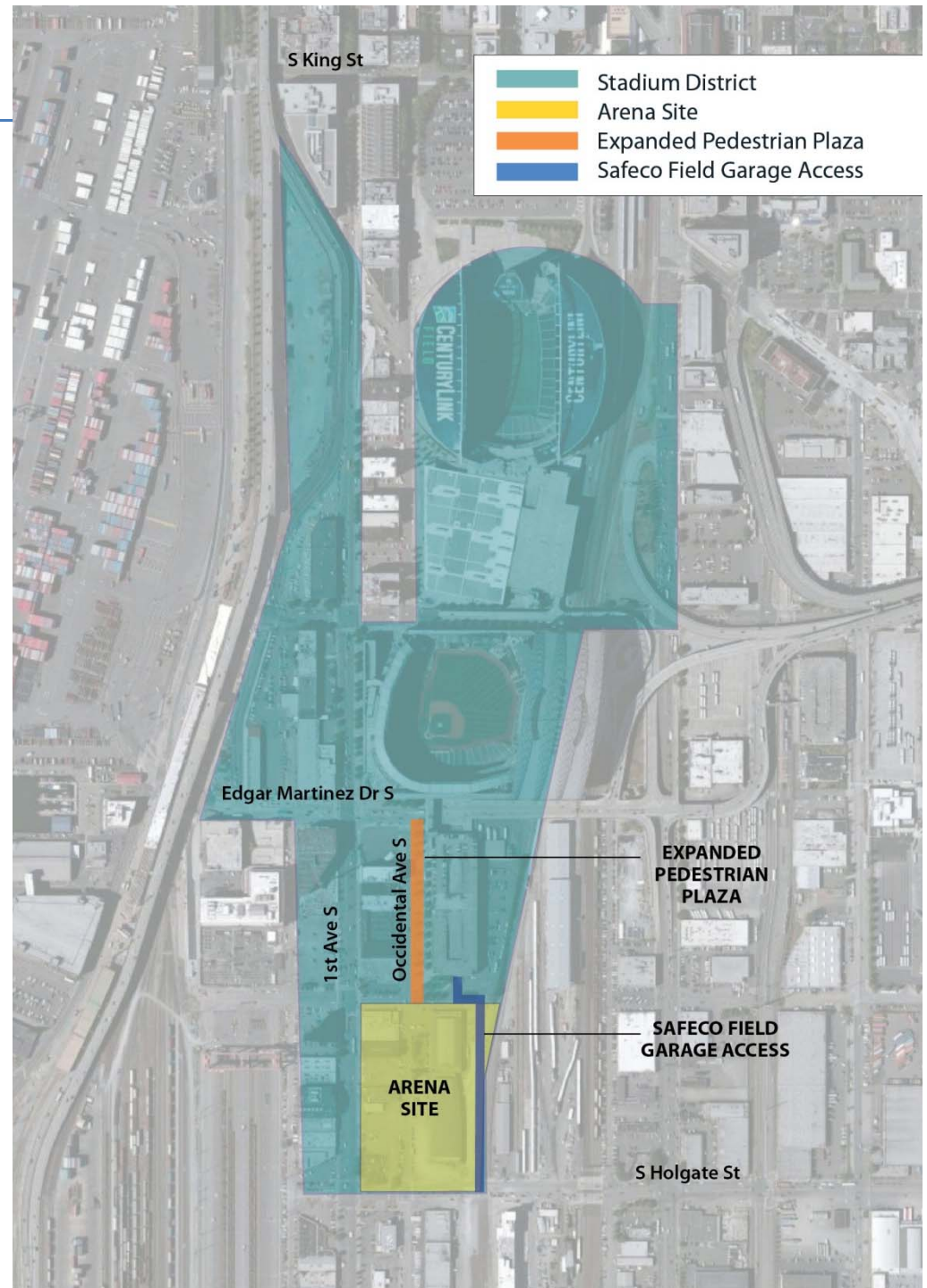
HORTON STREET, LLC

Agenda

1. Introduction
2. Event Schedule with the New Arena
3. Multimodal Transportation Access
4. Freight Transportation
5. Findings
6. Transportation Management Plan

Introduction

- Study purpose is to evaluate the multimodal transportation access and parking infrastructure
- Location of proposed site
- Vacation of Occidental Ave S. between S. Massachusetts St and S. Holgate St.
- Seating capacity assumed to be 20,000, which is a conservative assumption
- Stakeholder Outreach with:
 - SDOT
 - Port of Seattle
 - King County
 - WSDOT
 - ILWU
 - Seattle Freight Advisory Board
 - Duwamish TMA
 - Seattle Mariners
 - PFD
 - First and Goal
 - Public Stadium Authority (PSA)



ATTENDANCE COMPARISON

- Arena – 20,000
- 2011 Mariners – 23,500
- Sounders FC – 38,500
- Seahawks – 67,000



Event Schedule with New Arena

Summary of Event Scenarios

SCENARIOS	ASSUMED ATTENDANCE LEVELS	ASSUMED SEASON DURATION
Base	NHL – 20,000 NBA – 20,000 WNBA – 8,000 NFL – 67,000 MLB – 30,000 to 37,000 MLS – 38,500	Pre- and Regular season for all teams
Base plus Mariners high regular season attendance (2002)	MLB increased to 41,000 on weeknights and 47,000 on weekends	Same as base
Banner Years	Increases Mariners attendance to 47,000 during playoffs (sell out)	All six teams make playoffs through championship games

Event Schedule with New Arena

- This mode-split is based on a sold-out arena event
- This would add approximately 6,000 vehicles to the area. An AVO of 2.69 and a performance threshold of 300 vehicles per 1,000 event attendees was used.

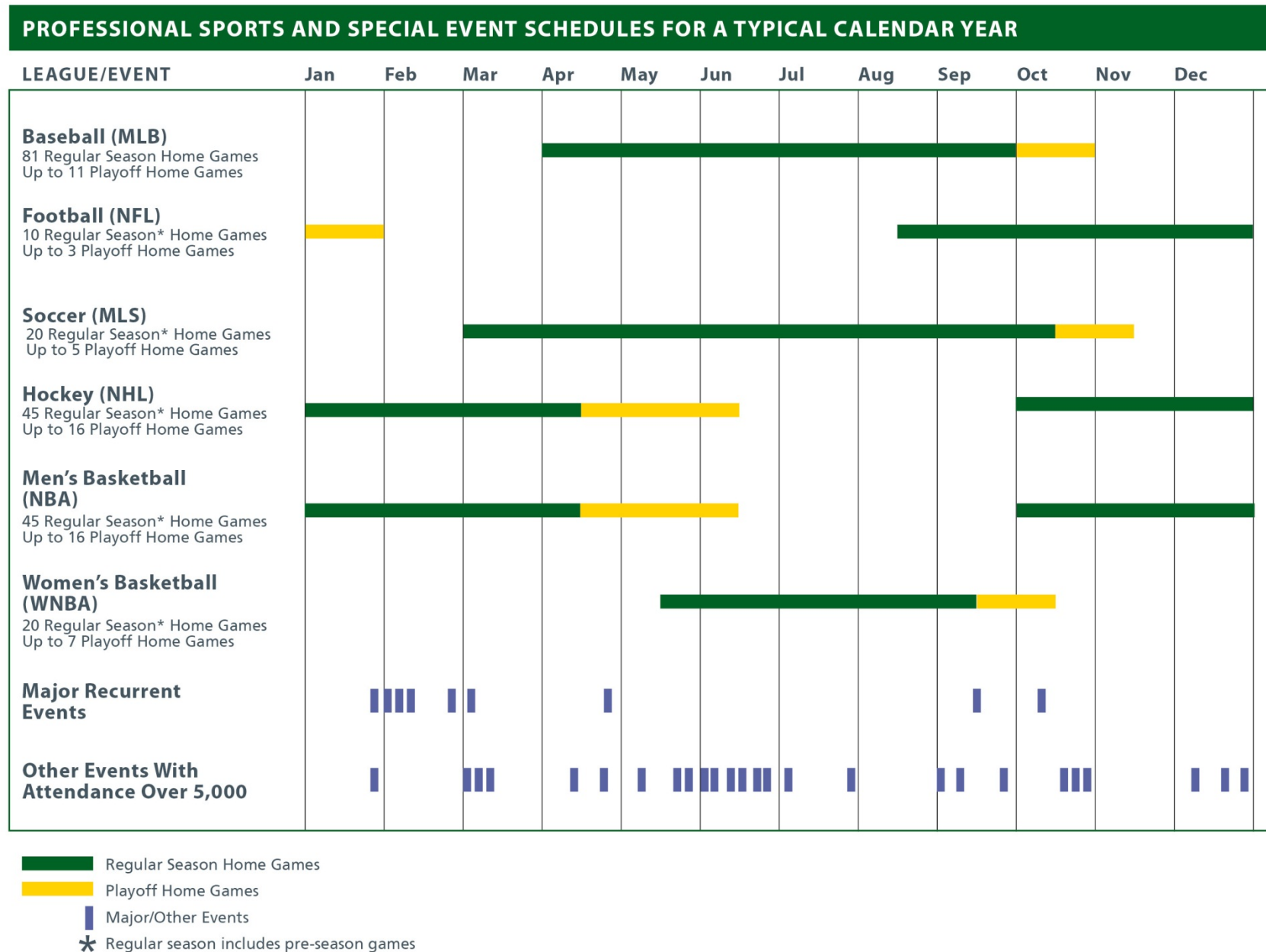
Estimated Arena Mode-Split

TRAVEL MODE	MODE SPLIT (%)	NUMBER OF EVENT ATTENDEES
Auto	81	16200
Rail Transit	6	1200
Bus Transit	3	600
Ferry Transit	4	800
Walk	4	800
Bicycle/Other	2	400
Total	100	20,000

Using an average vehicle occupancy of 2.69 results in 6,000 vehicles.

- This number of vehicles could be accommodated within the existing roadway, parking, and transit capacity in the area.

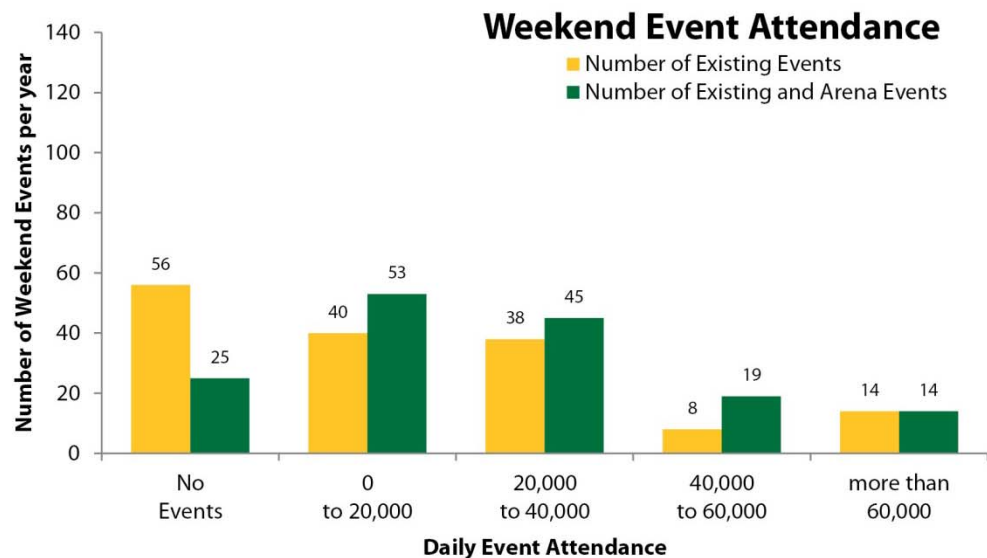
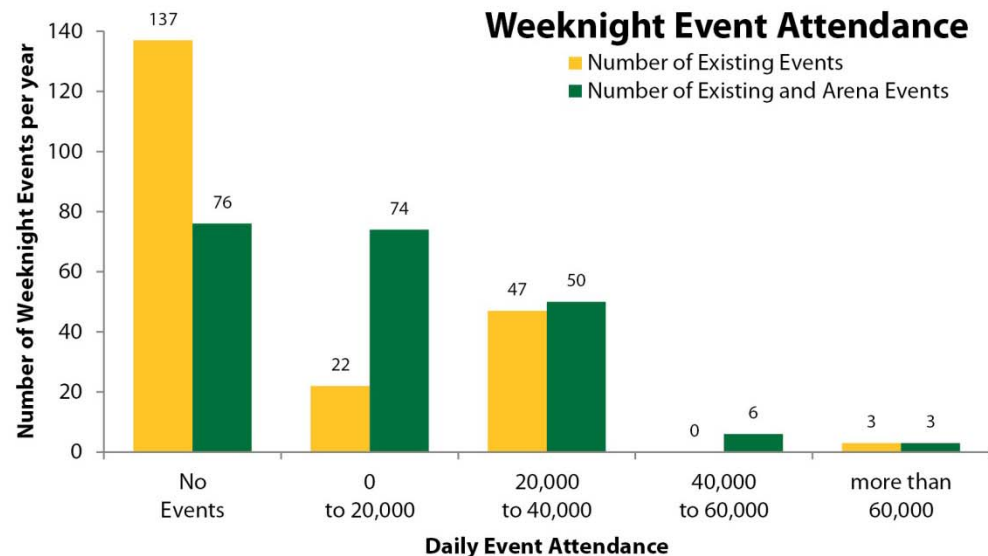
Assumed Schedule for Professional Sports Teams



Base Scenario

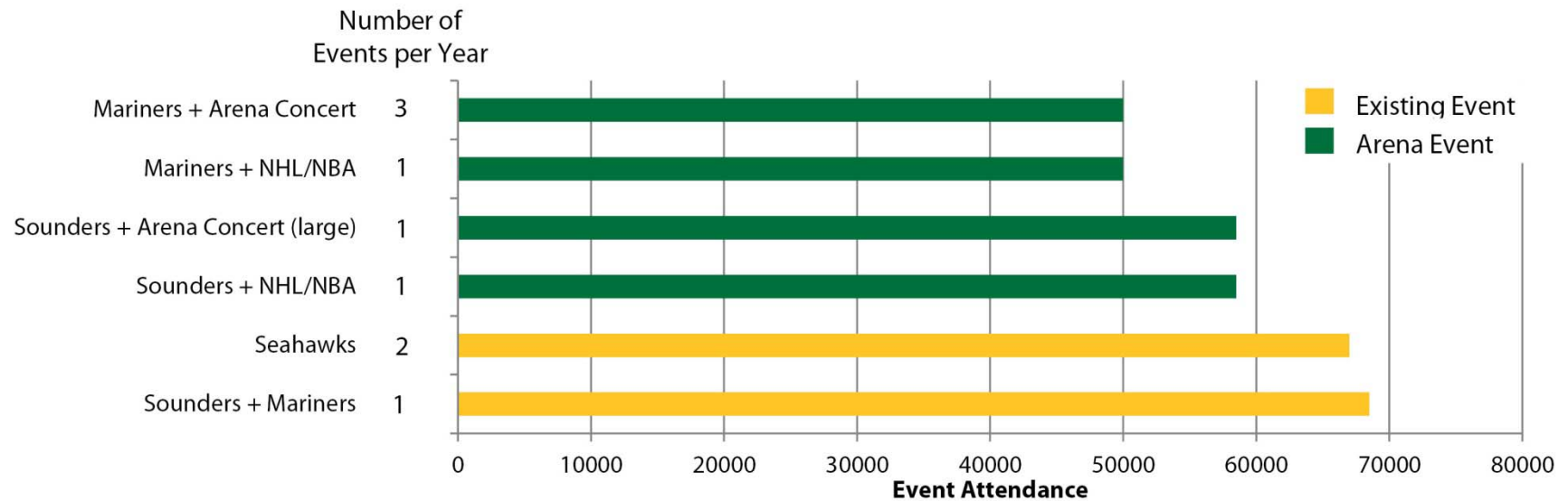
CHANGE IN NUMBER OF DAILY EVENTS:

- No Events ↓ from 193 to 101
- 0–20,000 ↑ from 62 to 127
- 20,000–40,000 ↑ from 85 to 95
- 40,000–60,000 ↑ from 0 to 6 weeknights, ↑ from 8 to 19 weekends
- 60,000+ no change
- Event start times would be offset to reduce impacts.
- Sold-out arena event adds approximately 6,000 vehicles



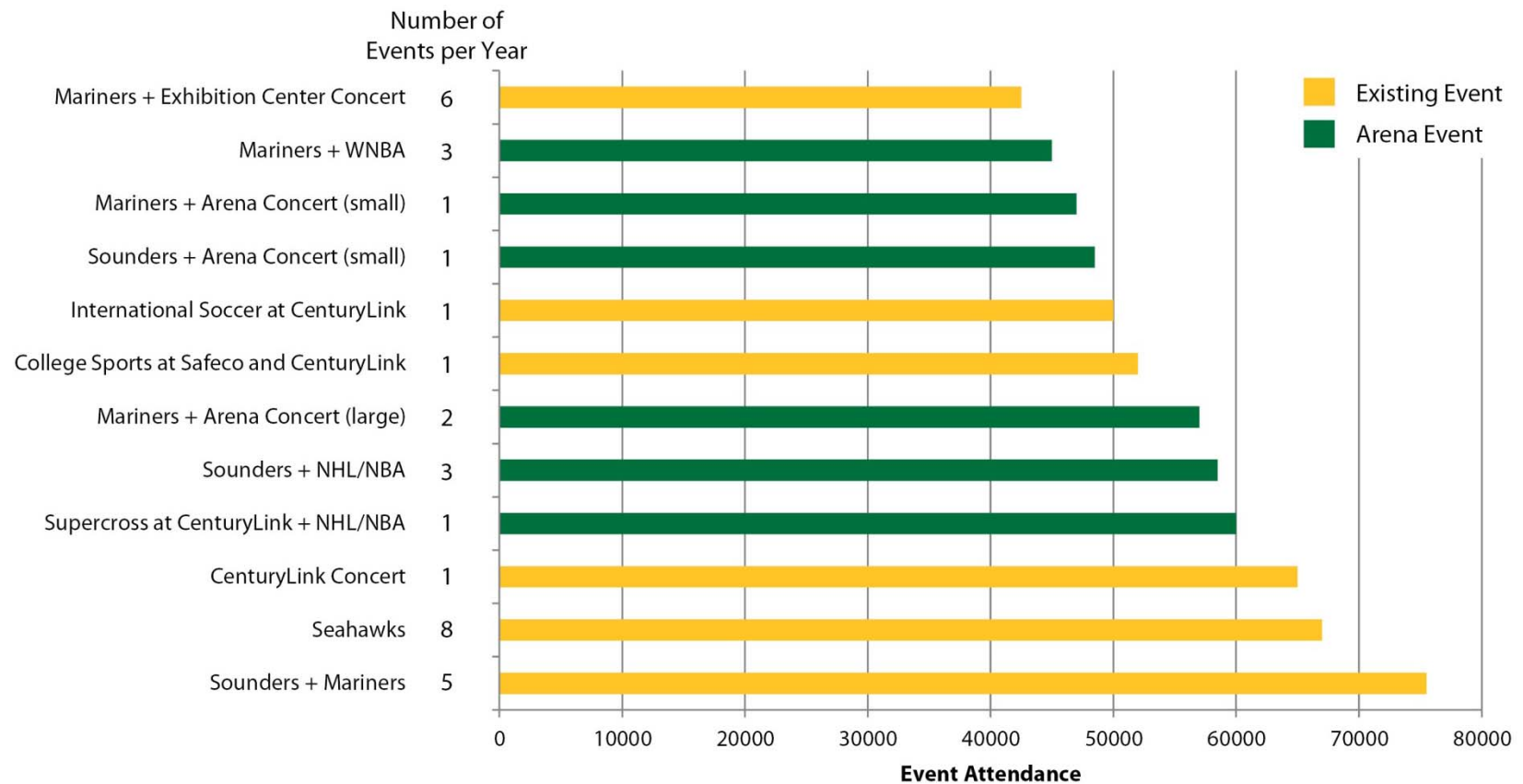
Base Scenario

Frequency of Weeknight Events with more than 40,000 Patrons



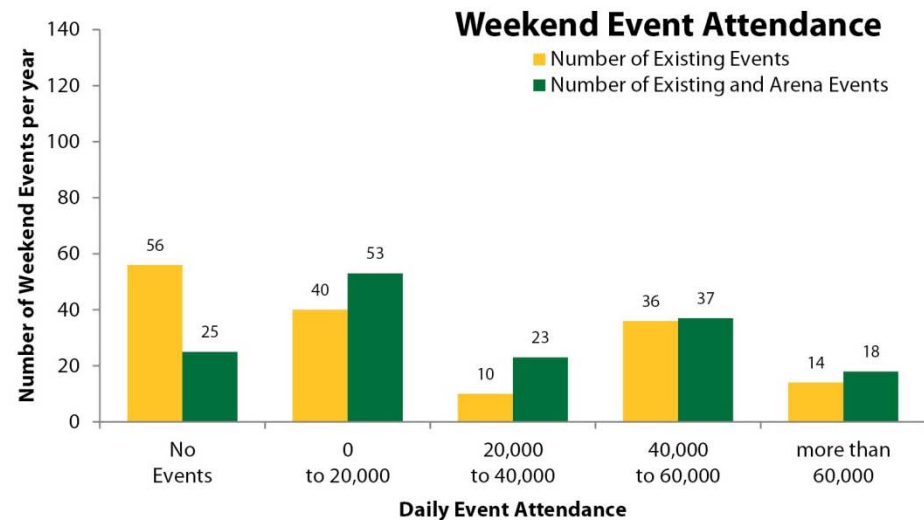
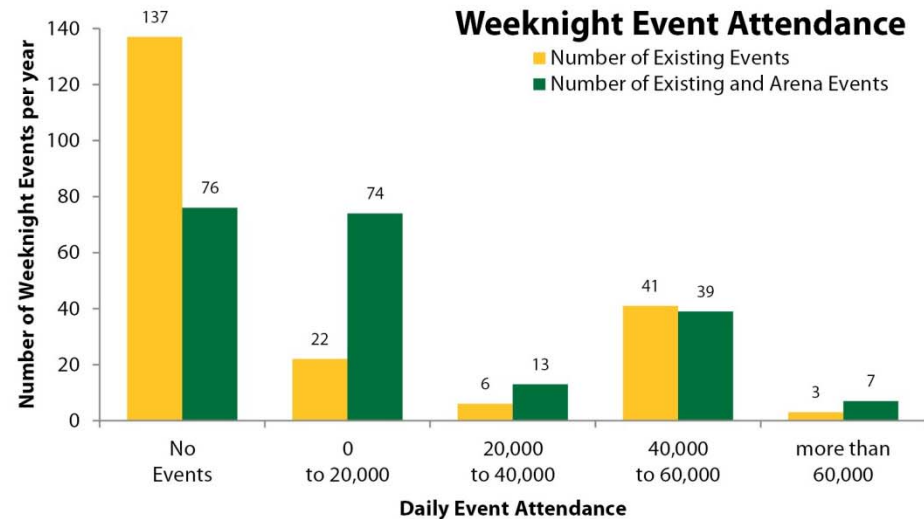
Base Scenario

Frequency of Weekend Events with more than 40,000 Patrons



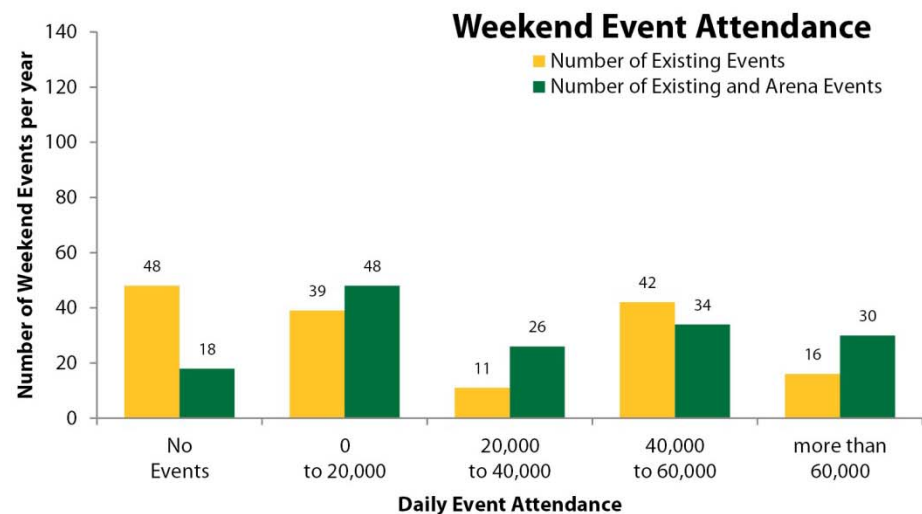
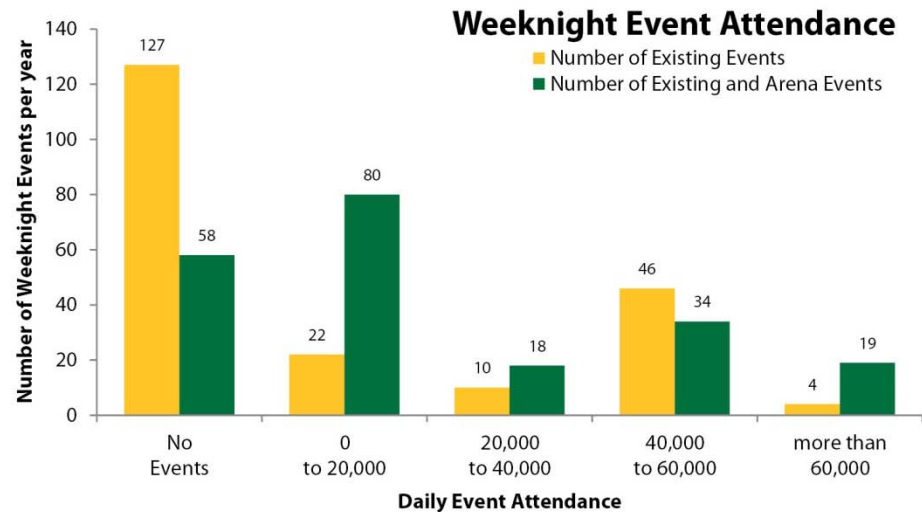
Base Plus Mariners High Regular Season Attendance (2002)

- 0–20,000 ↑ from 62 to 127
- 20,000–40,000 ↑ from 6 to 13 weeknights, ↑ from 36 to 37 weekends
- 40,000–60,000 ↓ from 77 to 76
- 60,000+ ↑ 17 to 25
- There are 77 events in the 40,000–60,000 range, this compares to 25 events with base scenario



Banner Year Scenario

- 0–20,000 ↑ from 61 to 128
- 20,000–40,000 ↑ from 10 to 18 weekdays, ↑ from 11 to 26 weekends
- 40,000–60,000 ↓ from 88 to 64
- 60,000+ ↑ 20 to 49
- 60,000+ increases because all teams are in the playoffs



Multimodal Transportation Access

- Transit use will increase as attendance increases
- Seahawks AVO is 2.69-2.81
- Mariners AVO is 3.16
- Arena assumed AVO is 2.69 (low end of range)

Performance Threshold	Performance Threshold Scenarios (X vehicles per 1,000 event patrons)			Existing Seahawks Sunday Game
	280	260	240	208
Bus	2%	4%	6%	12%
Rail	2%	5%	8%	17%
Walk	4%	4%	4%	4%
Bicycle	4%	4%	4%	4%
Ferry	4%	5%	6%	6%
Auto	84%	78%	72%	57%

Projected Mode-Split for New Arena Scenarios

Auto Access

Access Routes to Stadium District

I-5 Southbound

- James Street to 2nd Avenue S
- 6th Avenue S
- Dearborn Street
- 4th Avenue / Edgar Martinez Way
- Airport Way / Massachusetts Street / Holgate Street
- Forest Street

I-5 Northbound

- 6th Avenue S
- 1st Avenue S
- Dearborn Street

I-90 Westbound

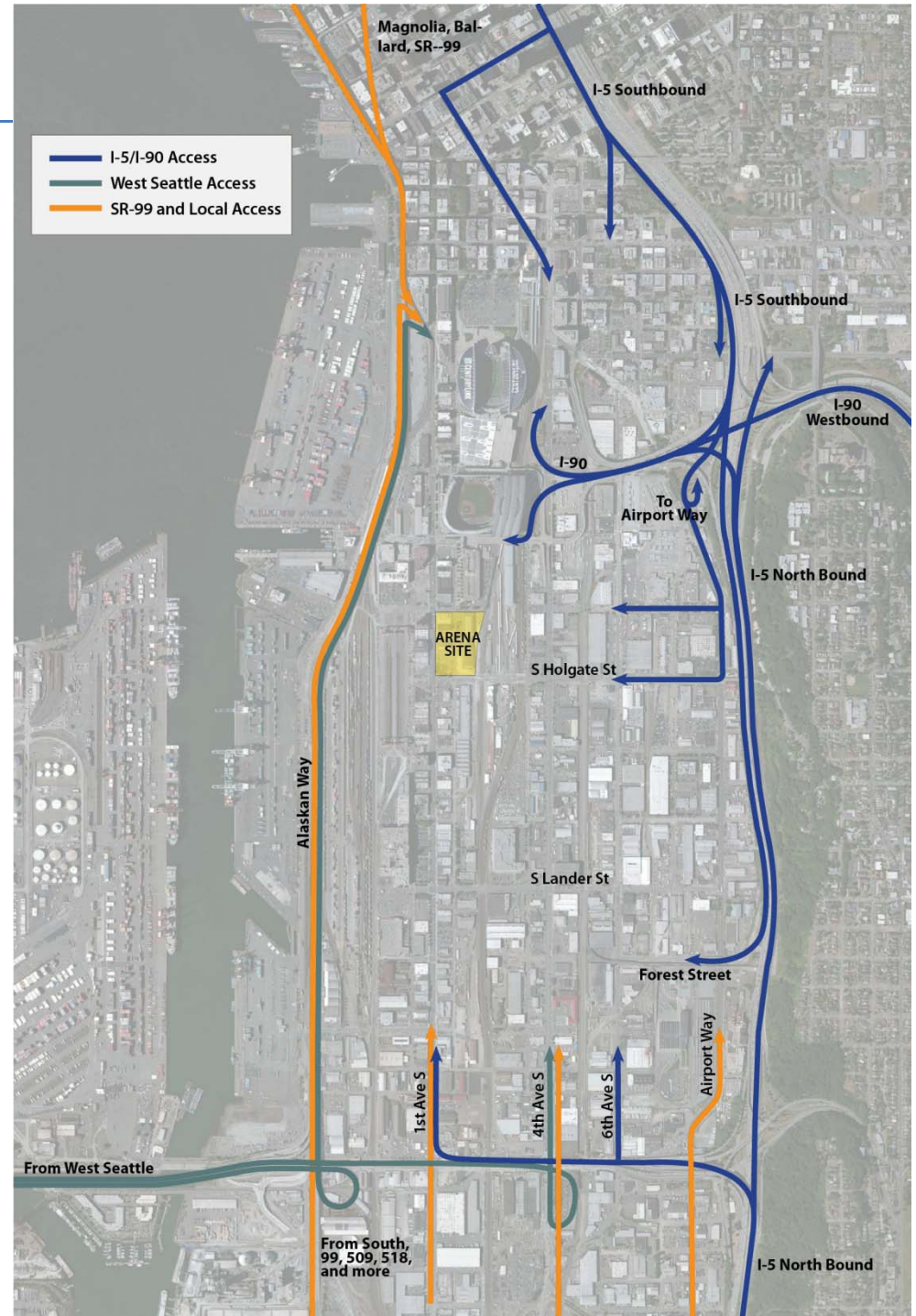
- 4th Avenue S / Edgar Martinez Way
- Rainier Avenue to Dearborn Street
- James Street to 2nd Avenue S

West Seattle Access

- SR 99 / Alaskan Way
- 4th Ave S

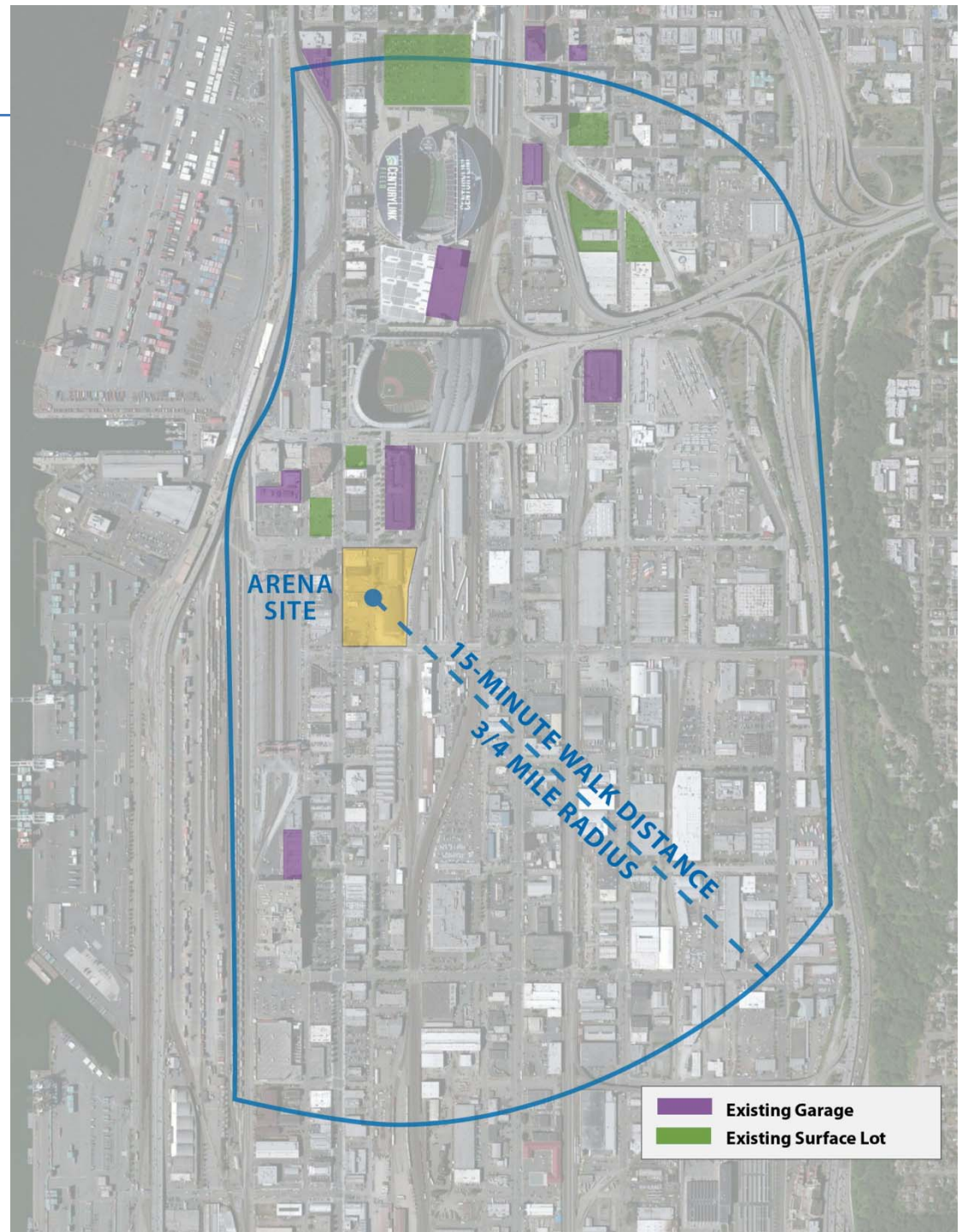
SR-99 and Local Access

- Dearborn Street
- SR 99 / Alaskan Way
- 1st Avenue S
- Airport Way



Parking

- 20,100 total parking spaces within 15-minute walk of venues
- Arena only event:
5,600 - 6,000 spaces needed
- Arena + Capacity
Mariners event: 18,800 spaces needed



Transportation Management Plan

- Most Seattle Arena TMP components are expected to be similar to the Safeco Field and CenturyLink Field TMPs
- Some event day management tools warrant further consideration:
 - Variable, Dynamic and Changeable Message Signs
 - E-Park
 - Game Day Phone Apps
 - Local Transit Options
- These tools would benefit all of the venues, enhance the fan experience, and reduce congestion in the area
- Transit shuttles between the new arena and the light rail stations, streetcar stations, and downtown Seattle could be implemented for high attendance same-day same-time events

Transit Access

- Bus, streetcar, light rail, ferries, commuter rail
- 35,000 park and ride spaces connected by bus and/or rail
- Post-event transit capacity is 16,000












Mode of Access	Capacity
Link Light Rail	5,100
Bus	3,800
Sounder	3,000
Ferry	4,200

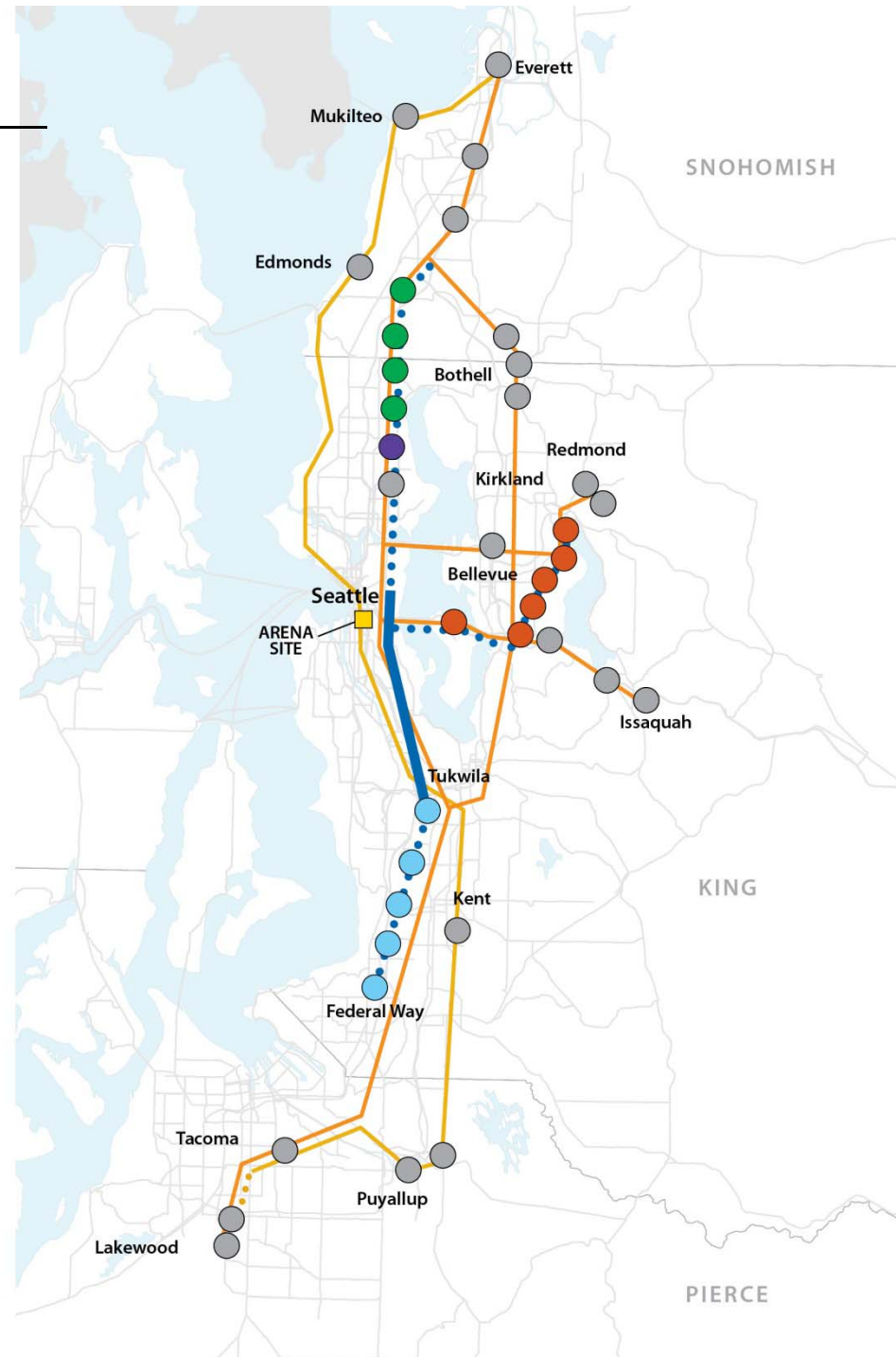
Summary of Estimated Transit Capacity



Regional Park and Rides

- Link light rail adds 5,000 spaces
- 13,000 spaces total at Link stations with extensions to Lynnwood, Redmond, and Kent/Des Moines

	EXISTING	PLANNED
Link Light Rail		
Express Bus		
Sounder Train		
P&R LOCATIONS		
Express Bus/Sounder		
Lynnwood Link		
North Link		
East Link		
South Link		

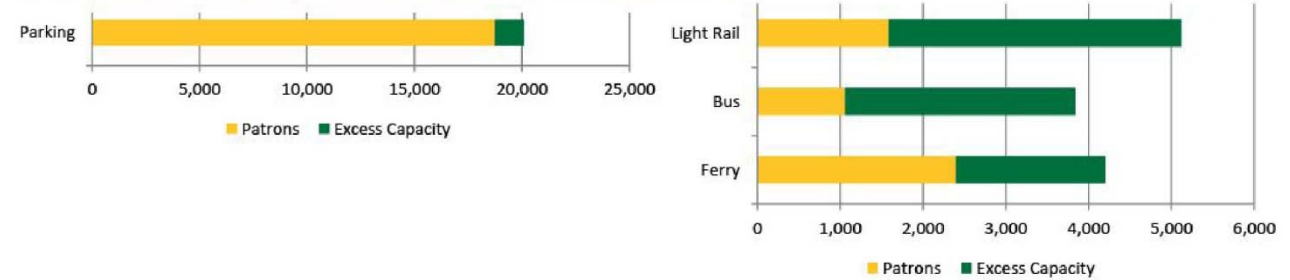


Multimodal Transportation Plan Summary

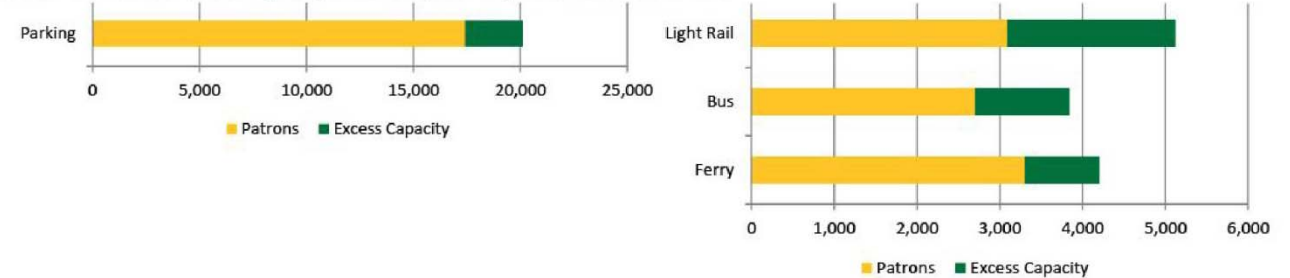
With a rare same-day same-time Mariner game (47,000) and sold-out arena (20,000)

- Event patrons can be accommodated
- Transit use would increase over time to fill capacity
- Parking use would decrease

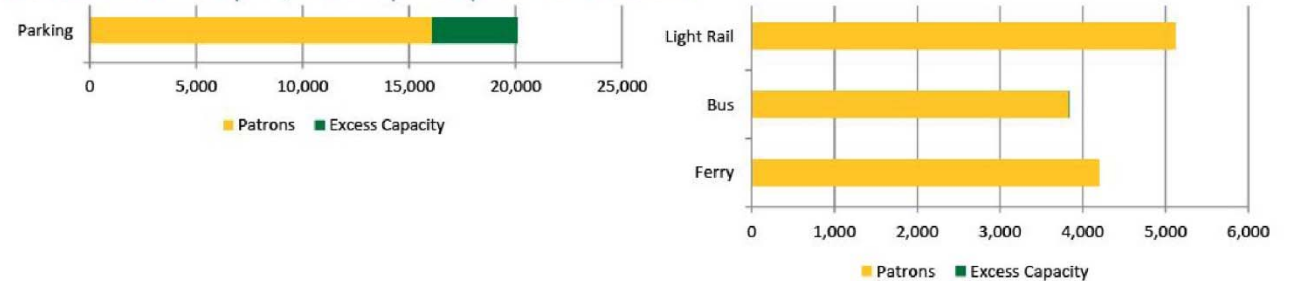
Year of Opening: 280 vehicles per 1,000 event patrons performance threshold



2020 to 2030: 260 vehicles per 1,000 event patrons performance threshold



Post 2030: 240 vehicles per 1,000 event patrons performance threshold



Freight Transportation

- The Sodo district is the home of Port of Seattle container terminals 46 and 30, intermodal rail transfer yards, major rail lines and truck route
- The Port of Seattle is the 6th largest U.S. port in 2011 based on the Twenty-foot Equivalent Units (TEUs) volume
- Regular hours for container terminal operations are 7 am to 4:30 pm at Terminal 46 and 8 am to 4:30 pm at Terminal 30, Monday through Friday



Freight Transportation

- The terminals are closed on weekday evenings and on weekends when the majority of sports and other events take place at the new arena
- Weeknight start times for NBA, NHL, and WNBA games would likely be 7:35 pm
- Most arena event attendees would arrive at the facility no earlier than 2 hours prior to game time, conflicts between Port of Seattle container terminal traffic and arena traffic would be minimal

Freight Transportation

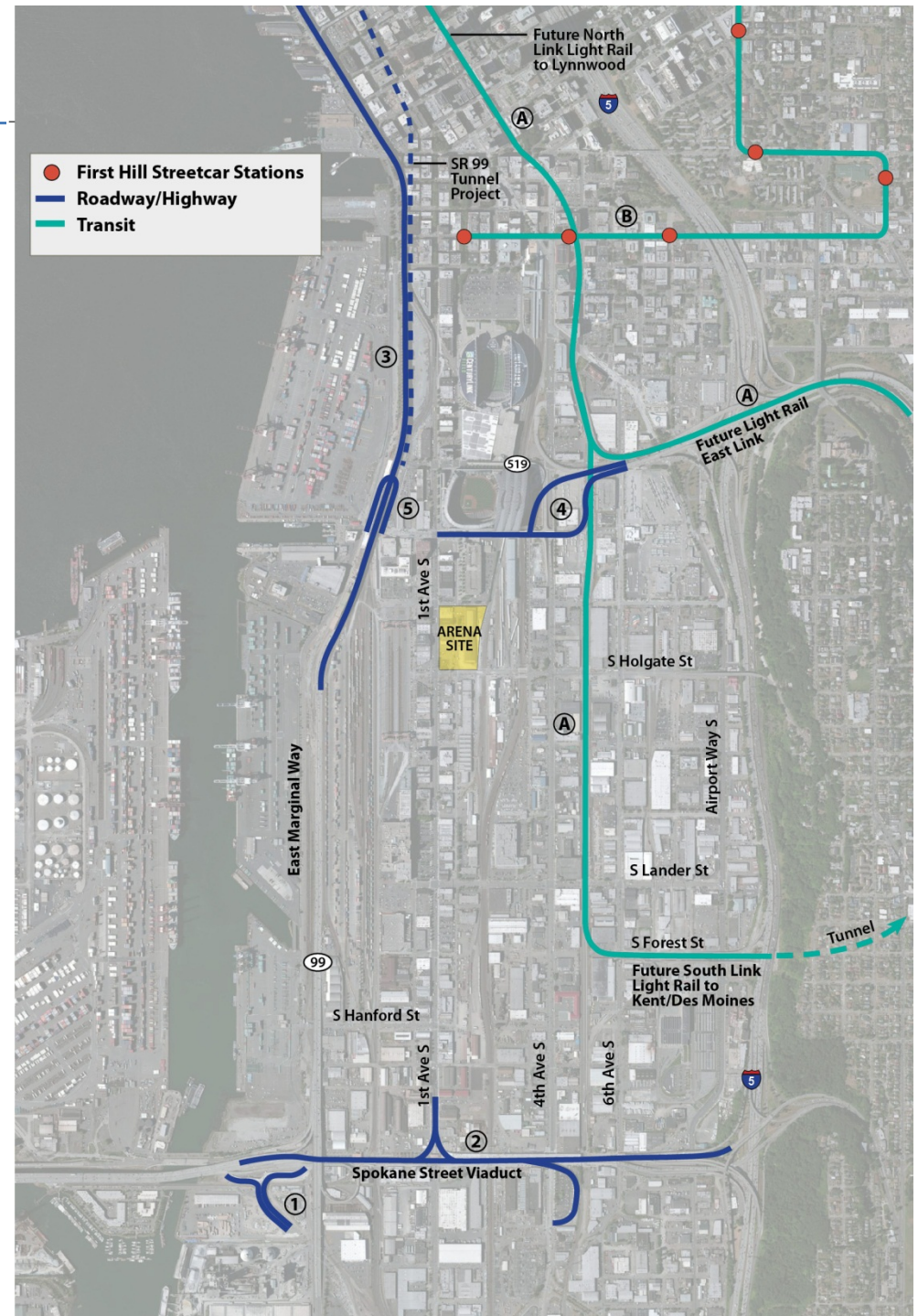
The adjacent map illustrates funded roadway capital improvement projects near the new arena that would benefit transit, freight, and the traveling public.

CAPITAL IMPROVEMENT PROJECTS

- ① East Marginal Way Grade Separation
- ② Spokane Street Viaduct Widening Project
- ③ Surface Alaskan Way and SR 99 Tunnel
- ④ SR 519
- ⑤ South Atlantic Street Overcrossing

TRANSIT CAPITAL IMPROVEMENT PROJECTS

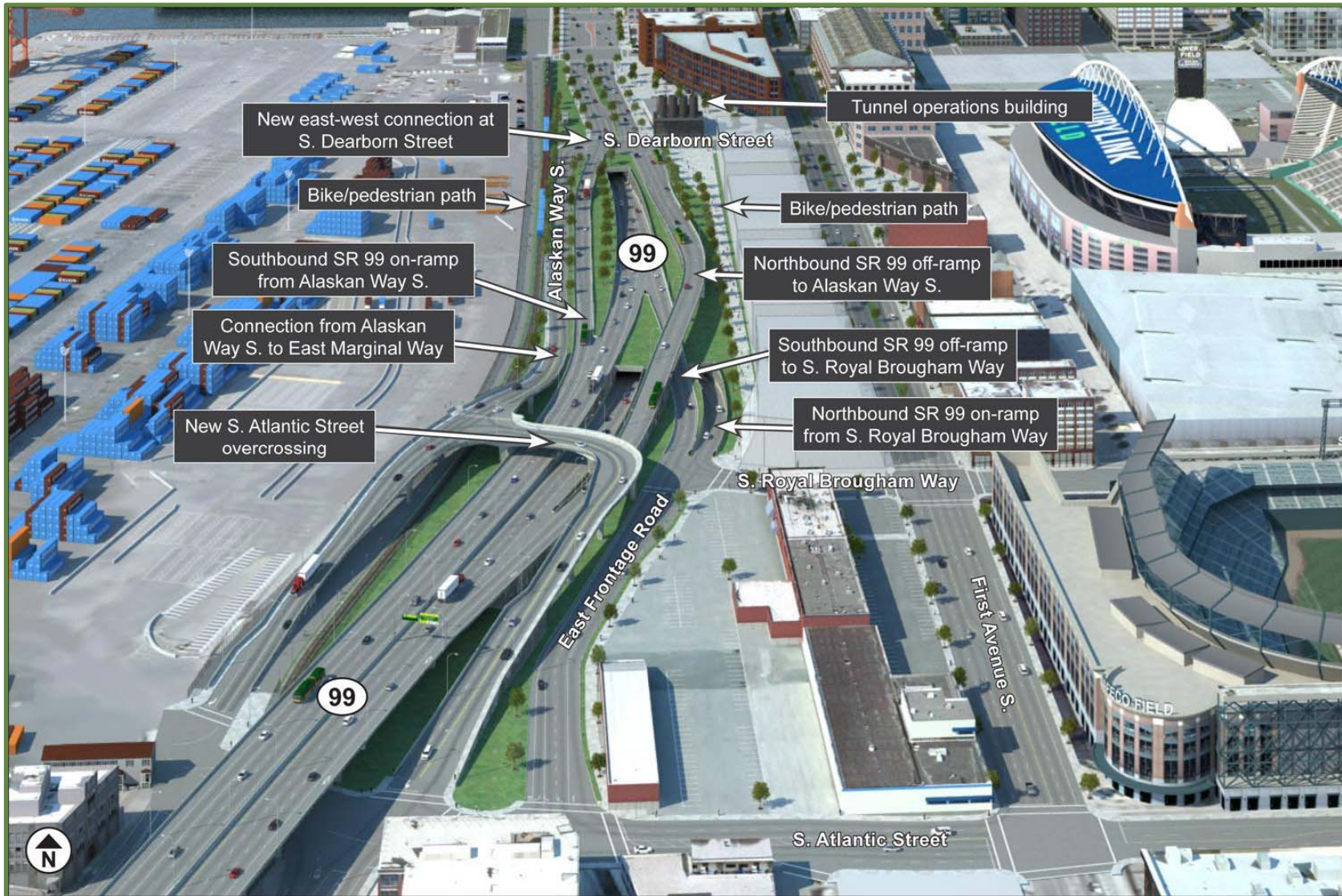
- ④ Sound Transit East Link Light Rail
- ⑤ First Hill Streetcar



S. Atlantic Street overcrossing



South Portal Design



Findings

ARENA ONLY EVENTS

- Sold-out arena event (20,000 attendees) adds approximately 6,000 vehicles
- 52 weeknights with Arena events only are well within the existing parking / traffic / transit capacity
- Link light rail and First Hill Streetcar projects will substantially increase transit capacity in the next 10 years
- Same-day same-time events are the primary focus of the study

Findings

MULTIPLE EVENT SCHEDULES AND ATTENDANCE

- Weeknights with 40,000+ event patrons increases from 3 to 9
- 40,000+ attendee events could increase by up to 15 on weeknights if one or more teams make the playoffs
- For comparison, there were 40 weeknight games in the Mariners season (2002) with 40,000+ event patrons
- With similar 2002 Mariners attendance levels, 40,000+ weeknight events would increase from 44 to 46 with the arena.
- Most same-day same-time events would be 40,000 - 50,000 event patrons; lower than a weeknight Seahawks game at 67,000.
- Same-day same-time Seahawks/arena events were not assumed in the study.

Findings

MULTIMODAL TRANSPORTATION ACCESS

- More transportation options exist today compared to the Mariners peak attendance year.
- More transportation options will be available before the arena opens.
 - Link Light Rail extensions
 - First Hill Streetcar
 - East Marginal Way Grade Separation
 - Spokane Street Viaduct Widening Project.
 - Alaskan Way Viaduct Tunnel replacement
 - South tunnel portal interchange
 - South Atlantic Street overcrossing
- 35,000+ parking spaces exist at Snohomish, King and Pierce County park and ride lots
- Link light rail extensions would provide access from over 13,000 park and ride spaces.

Findings

PARKING

- Parking supply within a 15-minute walk of arena would be sufficient to accommodate 60,000+ attendance same-day events
- This assumes 3,500 new spaces
 - Approximately 1,500 spaces new to the arena and 2,000 potential spaces from other projects

Findings

FREIGHT AND PORT

- Arena event times generally do not coincide with the regular Port of Seattle container terminal operations
- Day-time arena events would be rare
- Most Port of Seattle operations close at 4:30 pm – this could be extended if growth in container volume occurs
- Arena events start at 7-7:30 pm
- Majority of event traffic would be on 1st Avenue and roadways to the east.
- Majority of Port of Seattle operations are west of 1st Avenue S – Port of Seattle operations are effectively separated from event traffic.
- Planned and funded infrastructure improvements would improve Port of Seattle operations
- Atlantic Street overpass provides a new direct connection between the container terminals and rail yards